

Pertussis Investigation Overview

The following guidelines provide a brief overview of the steps of a pertussis contact investigation. Because pertussis investigations can be complicated, understanding of the [Local Health Department Disease Investigation Steps](#) for pertussis in the NC Communicable Disease Manual is essential. Additional resources, such as school letters and line list templates are also available through the NC DPH Communicable Disease Branch (919-733-3419). Investigations that may be complicated by setting, high-risk individuals or other complicating factors should be discussed with the Communicable Disease Branch epidemiologists.

Contact investigations should proceed for all cases of pertussis. When pertussis is strongly suspected, attempts to identify and provide prophylaxis to close contacts should proceed without waiting for laboratory confirmation. When suspicion of pertussis is low, the investigation can be delayed until there is laboratory confirmation of the diagnosis. However, prophylaxis of infants and their household contacts should not be delayed because pertussis can be severe and life-threatening to young infants.

Basic Steps of a Pertussis Investigation

1. Collect clinical information	<ul style="list-style-type: none">• Including:<ol style="list-style-type: none">1. Onset of cold-like symptoms2. Onset of cough3. Other symptoms: paroxysms, whoop, posttussive vomiting, apnea• Use information collected from medical records or speak with the case (if the case does not remember ask about events, holidays, birthdays, etc. to see if s/he remembers coughing at this time – continue asking until the best date is established)
2. Determine infectious period	<ul style="list-style-type: none">• <u>Start</u>: Beginning of catarrhal stage (runny nose, low-grade fever)• <u>End</u>: 3 weeks after the onset of paroxysms or until 5 days after the start of effective antimicrobial treatment (whichever is first)
3. Manage the case	<ul style="list-style-type: none">• Verify that case has been appropriately tested, treated and isolated during the infectious period
4. Identify all contacts of case during infectious period	<ul style="list-style-type: none">• Contacts have:<ol style="list-style-type: none">1. Had direct contact with respiratory, oral or nasal secretions2. Had face-to-face exposure within 3 feet3. Shared the same confined space in close proximity for ≥ 1 hour• Determination of contacts should be more inclusive in high-risk settings such as neonatal intensive care, newborn nursery, or infant wards• Consider using a line list to organize this information
5. Gather information about contacts	<ul style="list-style-type: none">• Collect necessary information from contacts, including:<ul style="list-style-type: none">• Symptoms of pertussis• Date of last exposure to case while infectious• High-risk status*
6. Manage contacts	<ul style="list-style-type: none">• Course of action will depend on the type of contact, presence of symptoms, time since last exposure and high-risk status*• Contacts not up-to-date on pertussis vaccination should be referred for vaccination
➤ Symptomatic contacts	<ul style="list-style-type: none">• Refer to healthcare provider for appropriate testing and treatment• If pertussis is suspected, isolate/exclude until no longer infectious
➤ Asymptomatic household contacts	<ul style="list-style-type: none">• If within 3 weeks of <u>onset of cough in the index case</u>, PEP is recommended**• Instruct contacts to monitor for symptoms for at least 3 weeks after last exposure• If high-risk contact* in household, see section below
➤ Asymptomatic high-risk contacts*	<ul style="list-style-type: none">• If within 3 weeks of <u>last exposure</u>, PEP is recommended**• Instruct contacts to monitor for symptoms for at least 3 weeks after last exposure
➤ Asymptomatic non-high-risk contacts*	<ul style="list-style-type: none">• Instruct contacts to monitor for symptoms for at least 3 weeks after last exposure

*High-risk contacts include persons at high-risk for severe illness or complications of pertussis AND any persons at high-risk for transmitting to one of these high-risk persons. High-risk contacts include:

- Infants and women in their third trimester of pregnancy
- All persons with pre-existing health conditions that may be exacerbated by a pertussis infection
- Contacts who themselves have close contact with either infants under 12 months, pregnant women or individuals with pre-existing health conditions at risk of severe illness or complications
- All contacts in high-risk settings that include infants aged <12 months or women in the third trimester of pregnancy

**CDC PEP Guidelines: <http://www.cdc.gov/pertussis/outbreaks/PEP.html>

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